

SUBMITTING A PAPER TO THE TRANSACTIONS OF THE UFFC: A HELPFUL LOOK AT PERILS AND PITFALLS ALONG THE PEER REVIEW PATHWAY TO PUBLICATION

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- The AE's decision is based on all the reviews received, but mixed reviews present the need for the exercise of editorial judgment.
- The final decision for acceptance or rejection lies with the AE.



THE PATHWAY TO PUBLICATION

•Know the process

•Use the process

•Respect the process

THE PROCESS **SERVES THE AUTHORS**

THE PROCESS IS PACED BY THE **AUTHORS**



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THE PATHWAY TO PUBLICATION IEEE MANUSCRIPT CENTRAL

Submission via Manuscript Central (MC): To qualify for publication in the IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control (TUFFC), the submissions must be unpublished, specifically prepared for TUFFC, and not be under consideration elsewhere (see "Ethics" later in this document). However, previously published conference papers are an exception provided that the papers have not been previously peer reviewed. An example is a paper for which only the abstract had been reviewed and where there exists no copyright conflict with the publisher of the conference paper. All the conference manuscripts will receive the same level of review as any other manuscript to ensure a consistent quality of the TUFFC. For manuscripts that have more than one author, the corresponding author must ensure that all the authors are aware that the manuscript is being submitted to the Transactions.

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THE PATHWAY TO PUBLICATION **IEEE MANUSCRIPT CENTRAL**

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"PERILS AND PITFALL"

HOW CAN AUTHORS IMPACT THE QUALITY AND TIMELINESS OF THE PUBLICATIONS IN TUFFC

- •Reviewed the Rejected Manuscripts (non-special issue) for January 1, 2007 to December 31,2007
- •Unbiased selection of Manuscripts (139)
- Tabulated reasons for rejection
- Generated representative categories for rejection
- Proposed countermeasures for each rejection category





"PERILS AND PITFALL"

HOW CAN AUTHORS IMPACT THE QUALITY AND TIMELINESS OF THE PUBLICATIONS IN TUFFC

Reviewed 139 Rejected Manuscripts (non-special issue) for January 1, 2007 to December 31, 2007

 47 were rejected with recommendation to resubmit as a correspondence or to submit another journal



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"PERILS AND PITFALL"

ANALYSIS OF 2007's REJECTED MANUSCRIPTS

MAJOR REASONS FOR MANUSCRIPTS BEING REJECTED. THEY APPEARED IN 30% TO 70% OF PAPERS.

- 1. REFERENCES INCOMPLETE
- 2. LANGUAGE STYLE SEMANTICS GRAMMAR
- 3. TITLE ABSTRACT- INTRODUCTION CONCLUSION ARE INCONSISTENT OR CONTRADICTORY
- 4. NOTHING NEW OR NOVEL (LACKING MOTIVATION FOR PAPER)
- 5. INSUFFICIENT TECHNICAL- THEORETICAL EXPLANATION







"PERILS AND PITFALL"

ANALYSIS OF 2007's REJECTED MANUSCRIPTS



MAJOR REASONS FOR MANUSCRIPTS BEING REJECTED. THEY APPEARED IN 30% TO 70% OF PAPERS.

- 6. UNCLEAR INCOMPLETE PRESENTATION OF EXPERIMENTAL SETUP
- 7. FIGURES GRAPHS EQUATIONS UNCLEAR/WRONG
- 8. NEEDS ADDITIONAL EXPERIMENTAL CONFIRMATION
- 9. LACKING A RIGOROUS SCIENTIFIC APPROACH





"PERILS AND PITFALL"

ANALYSIS OF 2007's REJECTED MANUSCRIPTS



MAJOR REASONS FOR MANUSCRIPTS BEING REJECTED. THEY APPEARED IN 20%-30% OF PAPERS

- **10. TECHNICAL CONCLUSIONS NOT VERIFIABLE**
- 11. REPETITION OF EARLY WORK BY AUTHOR(S) OR OTHERS
- 12. REVIEWERS COMMENTS WERE NOT ADDRESSED



PATHWAYS THROUGH "PERILS AND PITFALL"

Contributions from:

- ✓ Dr. Paul Reynolds, Weidlinger Associates, Inc. Mountain View, CA 94040-2607, e-mail: reynolds@wai.com
- ✓ TUFFC Unnamed Reviewers
- ✓ Stephen D. Senturia,"Guest Editorial How to Avoid the Reviewer's Axe: One Editor's View", Journal of Microelectromechanical Systems, Vol. 12, No. 3, June 2003, pg. 229-232,
- Michael Alley, The Craft of Scientific Writing, Third Edition, Springer, 1996. \checkmark
- ✓ Dr. Marjorie Passini Yuhas, IMS Inc., Aurora, IL, email: myuhas@imsysinc.com



PATHWAYS THROUGH "PERILS AND PITFALL"

1. REFERENCES INCOMPLETE

- Do a full literature search
- Read the references to derive other key references
- Limit references to non-peer reviewed papers, classified reports and personal communications
- Don't just reference your group
- •Reference to review papers will help reviewers and interested but not expert readers.



PATHWAYS THROUGH "PERILS AND PITFALL"

1. REFERENCES INCOMPLETE

- "If a reference is relevant enough to your work to cite it, then it is also relevant to your results... If you cite at the beginning then you must compare your allegedly new results with the contents of the cited papers."
- References are not just an irritation to have to provide but critical for reviewers because they will check. •Using results of others work and not referening can be interpreted as plagorism.
- Gives the author's historical and current perspective on the field.



PATHWAYS THROUGH "PERILS AND PITFALL"

2. LANGUAGE STYLE – SEMANTICS - GRAMMAR

• "Language is the way that words are used...in scientific writing, your language must be:

•Precise: choosing the right word and right level of detail

•Clear: avoid needless complexity and ambiguity

•Forthright: strong nouns and verbs with a controlling tone

Concise

•Familiar: Avoid unfamiliar terms (or define them immediately)

•Fluid: sentences are simple, have rhythm, continuous flow"



PATHWAYS THROUGH "PERILS AND PITFALL"

2. LANGUAGE STYLE – SEMANTICS - GRAMMAR

- Limits the comprehensibility of the manuscript
- Use a spell checker...then reread manuscript
- Define all abbreviations and acronyms at their first use
- Don't use subjective terms..."excellent correlation", "good agreement"
- Read the manuscript out loud...even to your children or dog or cat...
- Have a colleague read over the paper once before submission



PATHWAYS THROUGH "PERILS AND PITFALL"

2. LANGUAGE STYLE – SEMANTICS - GRAMMAR

Tactical corrections: Use a language-editing service

- 1. SPI Publisher Services: http://www/prof-editing.com/index.php
- 2. Asia Science Editing: http://www.asiasciencediting.com/
- 3. English Manager Science Editing: http://www.sciencemanager.com
- 4. ESC- English Science Editing: http://www.english-science.com
- 5. Inter-Biotec: http://www.omter-biotec.com
- 6. International Science Editing: http://www.internationalscienceediting.com
- 7. Scriptoria: http://www.script-edit.com
- 8. SquirrelScribe.com: http://www.squirrelscribe.com/
- 9. Write Science Right: http://www.writescienceright.com/



PATHWAYS THROUGH "PERILS AND PITFALL" 2. LANGUAGE STYLE – SEMANTICS - GRAMMAR



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PATHWAYS THROUGH "PERILS AND PITFALL"

2. LANGUAGE STYLE – SEMANTICS - GRAMMAR

- Gary Blake and Robert W. Bly, <u>The Elements of Technical</u> <u>Writing</u>, Macmillan USA, 1992.
- Robert A. Day, <u>Scientific English, A Guide for Scientists and</u> <u>Other Professionals</u>, ORYX Press, 1992.
- And many others



PATHWAYS THROUGH "PERILS AND PITFALL"

3. TITLE - ABSTRACT- INTRODUCTION - CONCLUSION ARE INCONSISTENT OR CONTRADICTORY

"Please be good enough to put your conclusions and recommendations on one sheet...at the very beginning...so that I can even consider reading it." Winston Churchill

-The title is the single most important phrase of a scientific document. -It identifies the field of study.

-It separates the document from others in that field.



PATHWAYS THROUGH "PERILS AND PITFALL"

- 3. TITLE ABSTRACT- INTRODUCTION CONCLUSION **ARE INCONSISTENT OR CONTRADICTORY**
 - Abstract should clearly state
- Value of paper's contributions to the field of interest
- Originality of contributions to the field \succ
- Methodology used (brief) \geq
- **Results (brief)** \succ

Abstract will influence whether a reader will continue with the paper.



PATHWAYS THROUGH "PERILS AND PITFALL"

3. TITLE - ABSTRACT- INTRODUCTION - CONCLUSION ARE INCONSISTENT OR CONTRADICTORY

An introduction should answer:

-What exactly is this work?

-Why is this work important?

-What is needed to understand this work?

-How will it be presented?

The conclusion provides:

-Closure

-Analysis of key results

-Future perspective on the work



PATHWAYS THROUGH "PERILS AND PITFALL"

- 4. NOTHING NEW OR NOVEL (LACKING MOTIVATION FOR PAPER)
- 5. INSUFFICIENT TECHNICAL- THEORETICAL EXPLANATION
- 6. UNCLEAR INCOMPLETE PRESENTATION OF EXPERIMENTAL SETUP
- 8. NEEDS ADDITIONAL EXPERIMENTAL CONFIRMATION
- 9. LACKING A RIGOROUS SCIENTIFIC APPROACH TECHNICAL
- **10. CONCLUSIONS NOT VERIFIABLE**

BE FAMILIAR WITH THE IEEE PUBLICATION PRINCIPLES



PATHWAYS THROUGH "PERILS AND PITFALL"

IEEE PUBLICATION PRINCIPLES

Technical papers submitted for publication must advance the state of knowledge and must cite relevant prior work.

The length of a submitted paper should be commensurate with the importance, or appropriate to the complexity, of the work.

Authors must convince both peer reviewers and the editors of the scientific and technical merit of a paper; the standards of proof are higher when extraordinary or unexpected results are reported.

http://www.ieee.org/portal/cms docs iportals/iportals/publications/journmag/transactions/TRANS-JOUR.pdf



PATHWAYS THROUGH "PERILS AND PITFALL"

IEEE PUBLICATION PRINCIPLES cont.

Because replication is required for scientific progress, papers submitted for publication must provide sufficient information to allow readers to perform similar experiments or calculations and use the reported results.

Although not everything need be disclosed, a paper must contain new, useable, and fully described information.

http://www.ieee.org/portal/cms docs iportals/iportals/publications/journmag/transactions/TRANS-JOUR.pdf 5/11/2010 27



PATHWAYS THROUGH "PERILS AND PITFALL"

IEEE PUBLICATION PRINCIPLES cont.

Authors should expect to be challenged by reviewers if the results are not supported by adequate data and critical details.

Papers that describe ongoing work or announce the latest technical achievement, which are suitable for presentation at a professional conference, may not be appropriate for publication in Transactions.

http://www.ieee.org/portal/cms docs iportals/iportals/publications/journmag/transactions/TRANS-JOUR.pdf



PATHWAYS THROUGH "PERILS AND PITFALL"

4. NOTHING NEW OR NOVEL (LACKING MOTIVATION FOR PAPER)

 This requires both broad and focused knowledge in the field of interest...current work needs to be presented in this context

• The novelty or motivation for the paper should be represented briefly in the abstract, more fully in the introduction and defended with results in the conclusion

•It is every author's obligation to establish clearly the context in which the new work belongs, both by a brief introduction and by citation of appropriate references (which the author should have read).



PATHWAYS THROUGH "PERILS AND PITFALL"

5. INSUFFICIENT TECHNICAL AND/OR THEORETICAL EXPLANATION

- It is insufficient to make concluding statements either theoretical or experimental without support explanations for such statements.
- The manuscript must follow a logical evolution of thought...
- As a scientific paper presented to a research audience...it should clearly describe all methods and procedures.



PATHWAYS THROUGH "PERILS AND PITFALL"

6. UNCLEAR INCOMPLETE PRESENTATION OF EXPERIMENTAL SETUP

- You must provide sufficient explanation of your experimental configurations so someone could replicate your results
- Provide information needed for 3rd party to reproduce your results...this is not debatable...it is required in all scientific papers.
- •As a scientific paper presented to a research audience...the paper should clearly describe all methods and procedures such that another researcher can exactly duplicate their results.



PATHWAYS THROUGH "PERILS AND PITFALL"

8. NEEDS EXPERIMENTAL CONFIRMATION

- Do not reference results or data that are not publicly available
- Do not refer to private communications (they cannot be verified)
- Needs logical strategy to present the experimental work that will answer:
 - •What happened?
 - •How did it happen?
 - •Where did the results come from?



PATHWAYS THROUGH "PERILS AND PITFALL" 9. LACKING SCIENTIFIC APPROACH



Scientific writing is non-fiction

•Keeping the "story telling" to a minimum

> http://www.abcteacher.com/imag es/cwg3503.gif



PATHWAYS THROUGH "PERILS AND PITFALL"

10. TECHNICAL CONCLUSIONS NOT VERIFIABLE

- The essence of scientific advance is that the results are believable because they have been repeated and checked by independent investigators.
- Write the paper in order of decreasing believability
 - •High believability: cited public record of published works, basic laws of physics, well established theories and models, widely practiced experimental procedures
 - •Medium believability: well described unique procedures, well described calculations

•Low believability: new results if the above is not done. 5/11/2010



PATHWAYS THROUGH "PERILS AND PITFALL"

7. FIGURES – GRAPHS - EQUATIONS ARE UNCLEAR or WRONG

- •Use consistent scales or if possible use the same scale
- •If you are comparing data, put them in one graph or at least graphs that are visually close together.
- •Use consistent legends...all graphs must have legends
- Make fonts large enough to read
- •Give units on all graphs and charts
- Don't rely on color for clarity
- •Don't complicate data presentation by used complex scales.

 Check and double check equations as presented in papers 5/11/2010



PATHWAYS THROUGH "PERILS AND PITFALL"

7. FIGURES – GRAPHS - EQUATIONS ARE UNCLEAR or WRONG

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PATHWAYS THROUGH "PERILS AND PITFALL"

11. REPETITION OF EARLY WORK BY AUTHOR(S) OR BY OTHERS

- Ignorance of earlier works is the author's problem
- "I use to tell my graduate students, first, figure out what you have done. Then, go to the library, and find it."
- •Such situations can be interpreted as plagorism



PATHWAYS THROUGH "PERILS AND PITFALL" 11. REPETITION OF EARLY WORK BY AUTHOR(S) OR BY OTHERS

Do a full literature search...Use several search engines





PATHWAYS THROUGH "PERILS AND PITFALL"

11. REPETITION OF EARLY WORK BY AUTHOR(S) OR BY OTHERS

Do full literature search...Use several search engines

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Search over 3.5 million documents, plus patents and <u>Twenty One societies</u> spanning 350 years of sci-tech scholarst	d governme nip help you	ent data. I with your	queries.		



PATHWAYS THROUGH "PERILS AND PITFALL" 11. REPETITION OF EARLY WORK BY AUTHOR(S) OR BY OTHERS

Do full literature search...Use several search engines

Google [™] scholar beta
Search Advanced Scholar Search Scholar Preferences
Stand on the shoulders of giants
<u>Go to Google Home</u> - <u>About Google</u> - <u>About Google Scholar</u>
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PATHWAYS THROUGH "PERILS AND PITFALL"

12. REVIEWERS COMMENTS WERE NOT ADDRESSED

REVIEWERS ARE VOLUNTEERS

- Reviewers add critical value to your paper show respect
- When reviewers have made major contributions to your paper ... " A thank you to anonymous reviewers may be appropriate".
- Ignoring reviews could impact you professionally...your papers have a high probability that the same reviewers will see many of your papers...learn from the reviews...don't make the same mistakes...reviewers become less forgiving over time



PATHWAYS THROUGH "PERILS AND PITFALL"

12. REVIEWERS COMMENTS WERE NOT ADDRESSED

REVIEWERS ARE VOLUNTEERS

- List all your related publications...the reviewers will find them and flag their omissions.
- Reply to every issue... include additional documentation listing all reviewers original comments with your responses. This will also reduce time it takes to get to another decision.
- •If you disagree clearly provide supporting arguments. Back up your statement with appropriate references. The AE will be the final adjudicator.



"PERILS AND PITFALL"

REASONABLE TO EXTRAPOLATE THAT THESE ISSUES ARE PRESENT ALSO WITH MAJOR REVISIONS

Manuscript Terms Accepted -The manuscript has been approved for publication. Major Revision - The manuscript requires substantial editing before being considered for publication. •Minor Revision -The manuscript will be approved for publication after some small changes are made. •Rejected -The manuscript will not be published in the journal for various reasons. •Revision -The corrected version of the Manuscript.



"PERILS AND PITFALL"

REASONABLE TO EXTRAPOLATE THAT THESE ISSUES ARE FUNDAMENTAL WITH MAJOR REVISIONS

Manuscript Terms Accepted -The manuscript has been approved for publication. •Minor Revision -The manuscript will be approved for publication after some small changes are made. •Rejected with recommendation for resubmission- The manuscript needs major revisions and additional experimental or theoretical work. Once authors encorporate the reviewers suggestions (or clearly document reason why they did not), they resubmit as a new manuscript. •Rejected -The manuscript cannot be published in the journal for documented reasons.



REFERENCES

- 1. IEEE Editorial Style Manual:http://www.ieee.org/portal/cms_docs_iportals/iportals/p ublications/authors/transjnl/stylemanual.pdf
- 2. SPI Publisher Services(IEEE has partnered with SPi to deliver professional editing services to authors who would like assistance with refining the use of English in their manuscripts.) http://www.prof-editing.com/ieee/index.php
- 3. Preparation of Papers for IEEE TRANSACTIONS and JOURNALS (May 2007) (Template and Instructions on How to **Create Your Paper):**

http://www.ieee.org/portal/cms_docs_iportals/iportals/publicati ons/journmag/transactions/TRANS-JOUR.doc



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- 4. Introduction to the Guidelines for Handling Plagiarism Complaints: http://www.ieee.org/portal/cms_docs_iportals/iportals/publications/ pubtoolsandpolicyinfo/Investigating Plagiarism Complaints.pdf
- 5. IEEE Peer Review:

http://ieeexplore.ieee.org/guide/g_infoac_peerev.jsp

- 6. About IEEE: http://www.ieee.org/web/aboutus/home/index.html
- 7. Information for Contributors--- with Multimedia Addition: http://www.ieee-uffc.org/tr/contrib.pdf
- 8. UFFC Transactions' Scope: http://www.ieee-uffc.org/tr/scope.pdf
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